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THE SOUTHERNER.

GEO. HOWARD, Jr., Editor & Proprietor.

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From the American Farmer.

Farming in New York.

It is sometimes interesting, and always instructive, to know how our brethren manage their farming operations in other States, and with the view of showing how a notable, points-taking farmer of the Empire State, manages so as to render his farm not only productive, but to keep it in an improving state, we shall make a few extracts from his Report to the N. Y. State Agricultural Society, in answer to questions propounded to him by that Association. The Report whence we make these extracts, was made by Mr. Elisha M. B. Adley, of Ontario county. His "soil is a gravelly loam, in some places merging to sand, and in others tending a little to clay; is from 3 to 12 inches deep, and rests upon a subsoil of red clay. Limestone abounds in the soil." He says, in answer to a question as to the best mode of improving the soil:

How to Improve the Soil.

"Plentifully manuring with well rotted manure, thoroughly mixing the manure with the soil, by means of the plow, cultivator and harrow, is esteemed the best manner of improving the soil."

DEPTH OF PLOUGHING.

"The usual depth of plowing, is as follows: for Corn from 6 to 8 inches; for Potatoes, Oats, Barley, Peas and Wheat, from 8 to 10 inches. Repeated experiments have established it as a fact, that thorough deep tillage ensures the best crops. I have frequently experimented in shallow and deep plowing for growing barley, oats, and wheat, and the result has ever been in favor of deep plowing."

EFFICACY OF SUBSOIL PLOUGHING.

"I last spring put the subsoil after a common plow, which turned a furrow 10 inches deep, upon corn stubble, which I was preparing for barley. The subsoil ploughed a furrow some 8 inches deep, pulverizing the ground thoroughly to the depth of 18 inches, with an exception of a small part of the field, which was not subsoiled, and from the time the grain was four inches high until harvest, a very great difference was observable in the appearance of the grain. Upon the part not subsoiled, it was scarcely a medium growth. Similar results have been obtained with peas and oats."

MANURES.

"Manure is mostly applied to hoed crops, upon which are applied 40 loads (of 30 bushels per load) per acre. Manure is made in [as] compact places as possible, and is either kept in as large heaps as possible, or under ample sheds, which are provided for all my cattle and sheep. Sheds and yards are kept thoroughly littered, and each yard has a basin into which the liquid excrements of the stock, and rain water are conveyed, and there taken up by coarse litter. At the close of the foddering season, the scattering litter and manure is gathered up and put under the sheds, or in compact heaps until rotted."

"My manure consists of the droppings of horses, cattle, sheep, hogs, and poultry, mixed with refuse straw, leaves, and every other available substance converted into manure. The accumulations in the privy, together with the carcasses of dead animals, PLASTER, muck, leached ashes, and almost every substance, (lime excepted,) find a place in the compost heap, and add much to the fertilizing products of the farm. A great amount of straw has been annually consumed on the farm, and is fed to sheep, cattle and horses, and freely used as litter. For the purpose of increasing

the amount of manure for the farm, crops have been sown upon shares on other farms, and the grain drawn home and thrashed, and the straw consumed upon the farm. I manufacture about 350 loads of manure annually, and apply about 400, the balance being purchased of my neighbors."

"Manure is applied rotted. If found necessary to use unrotted manure, it is applied to a corn crop, in the manner noticed under the head of tillage. For top-dressing upon meadows it is used thoroughly rotted."

"I use annually about three tons of plaster upon my grass lands, hoed crops and wheat. Salt has been occasionally used, and once upon corn, with satisfactory results. Leached ashes have been applied as a top-dressing upon meadow, and plowed in before root crops, to good advantage. Common wood ashes, unleached, are annually applied to corn, just as it makes its appearance above ground, and gives it a healthy appearance, and I think prevents worms from attacking it."

TILLAGE CROPS.

"1st. Manure heavily and plant to corn, or some hoed crops.

"2d. Succeed the following spring with barley, oats, and peas.

"3d. Sow to wheat in the fall, and seed to clover and timothy.

"4th. Cut a crop of grass for hay, and crop of clover for seed.

"5th. Seed each season for two years.

"6th. Pasture for one season, and then manure heavily and plant to corn, following again the above rotation, which occupies six years, and upon my farm gives me eleven acres for hoed crops, eleven acres for barley, oats and peas; eleven acres for wheat, twenty-two acres for meadow, and eleven acres for pasture, annually, upon plough land."

MODE OF CULTIVATING CORN.

"Corn is planted upon highly manured greensward, ploughed 6 or 8 inches deep, thoroughly harrowed, marked in straight lines, 3 feet apart each way. Five kernels are planted in each hill, care being taken that they are not all thrown together, but separated a few inches apart, and covered with nothing but mellow dirt, one and a half inch deep. As soon as planted, a thread of common woolen twine is stretched about the field, upon stakes firmly fixed in the ground, at about 6 feet from the ground, to notify the crows that they have neither part nor lot in the crop. When the corn first makes its appearance above ground, a table-spoonful of common wood ashes is put upon each hill. As soon as the rows are plainly seen, (or when the corn is about 2 inches high,) it is cultivated both ways of the field, and hoed, care being taken that the grass is perfectly cut up, and the dirt loosened around the stalks of corn. When the first hoeing is completed, it is plastered with about a tea-spoonful of plaster to each hill."

"In about two weeks from the first hoeing, and before it needs it, it is cultivated and hoed again. In two or three weeks more it is cultivated and hoed the third time, and plastered as after the first hoeing. No further culture."

CUTTING UP AND CURING THE CORN CROP.

"When it has generally begun to glaze, it is cut up by the roots, and set up in stooks containing about 25 hills each. As soon as sufficiently dry it is husked in the field, the corn drawn home and cribbed, and the stalks bound, and if well cured put immediately under cover."

SELECTION OF SEED CORN.

"In selecting seed corn, ears are selected, which are perfect in all respects, and well kernelled over the small end; the imperfect kernels from each end of the ear are removed, and the remainder shelled for seed."

PRODUCT.

"The average product of corn is from 70 to 100 bushels per acre."

CULTURE OF ROOT CROPS.

"Potatoes are cultivated as corn, planted the same distance apart, and receive the same treatment, and usually produce from 300 to 350 bushels per acre."

"Carrots and Beets are grown upon similarly prepared ground, in drills 18 inches apart,—average growth of beets, (blood and sugar varieties,) 400 bushels, and Carrots, 850 bushels per acre."

OTHER CROPS.

"Barley, Oats, and Peas are sown upon corn stubble, plowed from 8 to 10 inches deep. Three bushels of seed are sown per acre for the above crops, about the middle of April. Barley and Oats are cut when the quantity of milk in the kernel has begun to dry, bound in small sheaves, and put in small stooks to dry,

hauled in when well cured, and thrashed with machine, and the straw housed for feeding." Peas are hooked up with a scythe, secured when dry, thrashed with a hand flail, and the straw housed for feeding."

"The average of our Barley crop is from 45 to 50 bushels; of Oats, from 70 to 90. Peas have not been cultivated until the present season—the yield from one acre this season was 41 bushels, 31 lbs., allowing 60 lbs. per bushel. When practicable, the ground for Barley, Oats, and Peas, is subsoiled to the depth of 14 to 16 inches."

"Wheat is sown upon Barley, Oat, and Pea stubble, ploughed once from 8 to 10 inches deep. Two bushels of wheat is sown per acre, the first week in September, cut as soon as out of milk, bound small and set up in shocks to dry. Thrashed with machine, and the straw housed, or as much as possible. I would here remark, that room has been provided for storing the straw of 1,500 bushels of grain; that I consider straw and chaff where the grain is cut before [it is] ripe, and well secured, as highly nutritious and valuable, and I cannot afford to suffer the loss necessarily incurred in stacking all my straw.—Average wheat, 28 bushels per acre."

SOWING CLOVER AND GRASS SEEDS.

"Small Red Clover and Herd's Grass [Timothy] seed are sown upon the wheat. The latter in the fall, and the former in the spring; the fall after the wheat is cut, it is pastured but little; plastered early the following spring with about 100 lbs. per acre, and cut when in full bloom, cured in the heap and housed for feeding. The second growth is allowed to ripen for seed, and cut and cured in September. The same course is pursued the following year: an the third year it is pastured, and the following spring manured and planted. Average amount of grass cut per acre, from 1 1/2 to 2 tons; average clover seed, 3 to 4 bushels."

PRODUCTS OF THE FARM.

Upon this subject Mr. Bradley remarks:—

"A Farm Ledger is kept, in which a debt and credit account is kept with every field on the farm, with all kinds of stock, and all experiments instituted during the year." He also keeps "a Stock Register—a Fruit Register—a Meteorological Journal and Note Book." He gives a detailed statement of the receipts and expenses of the farm for 1850. The receipts were \$2,705.37—the Expenses, \$1,242.50; leaving a balance in favor of the year's operations, of \$1,462.87, equal to \$9.73 per acre, after paying interest and taxes.

MANAGEMENT OF FARM STOCK.

Mr. Bradley concludes his statement thus:—

"In reference to the care and management of Farm Stock, I would add, that in my opinion, a farmer ought never to allow an animal to grow poor upon his hands. That all farm stock should be kept thriving; and that when any animal deteriorates in value, it does so at the expense of its owner. In selecting stock for breeding, care is taken that the animal be in the prime of life, neither too young nor too old, and by no means unhealthy or diseased. The greatest possible care is also taken in selecting seed of all kinds for the farm; believing as a general rule, that like begets like."

"I subscribe for, and read, six agricultural papers, which I consider the best investment made in the year."

The statement from which we have made the preceding extracts, is sworn to by Mr. Bradley, and therefore the facts stated are implicitly to be relied upon. And we would ask the reader to bear in mind,—that Mr. Bradley only cultivated 66 acres of land, and yet his clear profits after allowing \$525 interest on the cost of his farm & improvements, \$300 for his own time and services, \$335 for hired help, \$50 for wear of team and tools, paying taxes, and all other expenses are deducted, amounted to \$1459.87; that his farm consists of 150 acres and that, calculating the net profit upon the whole extent of his farm it amounts to \$9.73 cents per acre. If however, we were to estimate it upon the quantity of land actually in cultivation, the average profit on the cultivated land would be \$22.11 61-66 per acre. Again, if we add the \$525, the interest on the land, and the \$300 for his services, which we think in determining the actual profit may be very properly done, it will give us a net average profit, per acre, of \$34. 61 61-66.

Such results as the preceding, demonstrate beyond all cavil, that when a farmer makes the accumulation of manure

an important feature in his system, as every farmer should, and when he comports it judiciously, and applies it with a free and liberal hand, farming is among the most profitable of human occupations, as well as most pleasant, independent, and honorable.

Mr. Bradley's farm and improvements, cost him \$7,500; if we take that as his capital in business, the net profits is rather more than 30 per cent interest a year. A fortunate merchant would perhaps, on a capital of \$7,500, make more profit in a year, but from the very nature of trade, where one merchant dies rich, ninety five die bankrupt, and leave their families destitute; whereas, not one prudent farmer in a hundred die insolvent.—Editor Am. Farmer.

From the Goldsboro' New Era.

THE

"Open Ground Prairie."

Newbern, March 28, 1852.

To His Excellency, David S. Reid:

Sir: I have the honor to inform your Excellency that immediately on receiving your instructions I proceeded to Carteret County, and entered as soon as possible upon ground prairie belonging to the State. In order to qualify myself the better to give an opinion respecting this remarkable variety of soil, I have examined similar soils whenever I could find them, especially where they have been under cultivation. Notwithstanding I have pursued this course, I am not ready to report in full, inasmuch as I have not been able to make analysis of the specimens of soils I have taken. I will, however, express my views as far as they have been formed, and then as soon as possible furnish you with the analysis when made.

These lands are situated in the neighborhood of Beaufort. They lie between Ward's Creek and the North River at the north-eastern terminus. I entered upon them at the head of Ward's Creek. My landing was near what is called Chinquepin ridge, which leads directly to them towards the North. It terminates in a belt of prickly evergreens, some eighty rods in breadth. These evergreens gradually diminish towards the open grounds, though they do not entirely disappear. The grass increases as these diminish, and finally, at about the distance of half a mile, the open grounds proper are reached.—This open ground is spongy and wet, though less so than I expected, for at Newbern and Beaufort and the surrounding country four days prior to my visit there had been also a heavy rain. There were places slightly elevated, which were comparatively dry. Numerous small pools of water are scattered over the ground, which are supposed to have been made by deer breaking up the turf and moss.

No. 1. Chinquepin ridge. Depth of soil 3 1/2 feet, consisting of vegetable matter mixed with sand and clay, bottom hard, though sandy. 2. Evergreens. Depth 5 feet soil vegetable, mixed with sand—some logs beneath. 3. 2 1/2 feet, vegetable much mixed with sand. 4. 5 feet, vegetable with a trifling quantity of sand. 5. Depth, 9 feet and no bottom, vegetable matter. 6. 7 feet do. 7. 8 feet, and at the depth of 4 1/2 feet logs. 8. 7 1/2 feet no bottom, some sand and clay mixed with the vegetable matter. 10. 7 1/2 and no bottom. 11. 6 1/2 feet of vegetable matter. The preceding soundings carried me fully into the open grounds, where the surface is grass and moss at its roots. 12. 6 1/2 feet, vegetable matter, a small quantity of sand and intermixed. 13. 5 feet do. 14. 5 1/2 feet. 15. 5 1/2 feet, sand at the bottom. 17. 4 feet struck clay. 18. 6 feet, bottom. 17. 4 feet, struck clay. 18. 5 feet bottom sandy. 19. do. 20. 5 feet and logs 3 1/2 feet.

It will be observed from the foregoing, that the depth of the soil is at least 5 1/2 feet, consisting mainly of vegetable matter, changed into a black substance intermixed with living roots. The bottom is sandy and hard and difficult to be penetrated by the sound. I continued my examination for a long time, until indeed I satisfied myself and the gentlemen who accompanied me, that the track is uniform, some of them having seen the same characteristics at more distant points still.

The impression which has been made upon my mind respecting this track is favorable upon the whole. That is, when thoroughly drained it will be productive. Of the feasibility of draining it I have not the least doubt. The water flows from it with quite a ripple at some places on Ward's Creek.

This opinion of its value is founded upon the fact, 1st. that it has produced trees, trunks of which remain. Now if

a soil has fertilizing matter sufficient to bear and mature trees with their leaves and fruit, it is a fair inference that it will produce corn. In the grass with which it is covered there are silicates of the alkalis. In the leaves and seeds of the fruits we have the phosphate of lime, iron and magnesia. It is true that in the stumps of the bay, which are scattered over the ground it is supposed we have the indications of cold acid soil, yet if so, draining becomes an effectual remedy. The whole track is cold and bleak now, from the great extent of evaporating surface. 2nd. I have examined lands of this character which have been quite productive for 16 years, though there is this difference, the latter evidently contained more sand, but it is coarser than that of the open grounds; still, I wish to determine the amount of soil, and clay, etc., which this vegetable matter contains before I shall feel confident of certain results.

I feel that it is very desirable that these lands should be reclaimed. They are situated in a very favorable position, easily accessible, and should they prove as productive as the Hyde County lands, would furnish more corn annually than the whole State of New York ever produced. But I do not expect they will be as productive, though that the outer rim will be I have no doubt, where it is bearing the thickest of the brambles. The State may very properly take a view of the matter. Draining will essentially change the soil—the surface will sink and the whole mass will become compact and more solid, and will, in process of time at least, be fitted for a successful cultivation.

I am, sir, most respectfully,

E. EMMONS.

From the Journal of Agriculture.

Salt and Lime Mixture, Decomposition of Muck, &c.

BY PROF. J. J. MAPES.

In our paper on "A Divisor for Manures, &c.," we spoke of "The Salt and Lime Mixture," and many inquiries have since been made by those who have not read the Working Farmer, as to the mode of preparing this mixture, its uses, cost, &c.

Common salt is composed of chlorine and soda, and when mixed with caustic lime is changed to chloride of lime and carbonate of soda.

The lime having a stronger affinity for chlorine than for soda, combines with it, forming chloride of lime; the soda being set free takes carbonic acid from the atmosphere and becomes carbonate of soda. This rationale may be objected to by chemists, as not strictly in accordance with the facts as to the original composition of the salt, &c., but they will all agree as to the result, which is what the farmer requires to know, and we have therefore adopted this simple rationale.

The mode usually adopted for making the salt and lime mixture, is to dissolve one bushel of salt in water, and with this to slake three bushels of caustic lime; lime is said to be caustic when freshly burned, and before receiving carbonic acid and moisture from the atmosphere, and unless in the caustic state will not ensure the desired results when slaked with salt water. The mixture should be made under a shed, or in a building, as the resultant chloride of lime and carbonate of soda are soluble in water, and must therefore not be exposed to rains or dews.

Unless the lime is really hot (purely caustic) when the salt water is added, the whole quantity in solution will not be received; but by turning over the heap the next day, it will be found to have absorbed the former dose and will receive the remainder. Sometimes three or four applications are necessary before the whole of the dissolved salt will be received by the lime. The mixture should be shovelled over every other day for a fortnight, and it will then be ready for use. The older the mixture may be, however, the more perfectly will the chemical changes have taken place.

Shell lime is preferred to stone lime when the latter contains magnesia, as it often does, especially as the shell lime contains a small proportion of phosphate of lime, which is more valuable than its other constituents.

The refuse salt procurable from the pork, beef, and fish inspection warehouses, taken from the barrels when repacked, is better for our purpose than clean salt, as the grease and other matters attached to it are valuable as manure. Farmers living near the salt water should slake their lime for agricultural purposes with it instead of fresh water.

Uses.—The chloride of lime and carbonate of soda, prepared as above recommended, is of itself an admirable manure for all soils deficient of chlorine, lime or soda; and also for peaty and other soils containing an excess of organic matter. Green crops, when top-dressed with the mixture before being plowed under, are less likely to render the soil clover-sick than when the mixture is not used. Many insects are removed by the use of the mixture. In preparing a general divisor for manures for farm use, the mixture is almost indispensable; for while it renders fetid substances inodorous, and prevents the formation and liberation of sulphuretted hydrogen and other noxious gases, it entirely neutralizes all acidity of muck, swamp-mud, river deposit, &c. &c.

Four bushels of the mixture, when properly and thoroughly prepared and mixed through a cord of any of the above named substances, or even with saw dust, spent tan, or any other substance requiring to be rendered pulverulent, will cause its disintegration, and will render the component parts accessible to plants.

The quantity of the mixture used for decomposing cheap organic matter may be increased to eight bushels per cord, or more, when the soil to which it will eventually be applied requires additions of any integrants.

Composts to which the mixture has been added, should always be kept in a moist (not wet) state to ensure speedy and effective action.

A farmer who has a full supply of organic matter decomposed as above, can render his stable manures many times more valuable by composting them with it: for all the ammonia given off by the feces during fermentation and decomposition, will be readily absorbed by decomposed muck, and thus ten loads of stable manure, composted as fast as made with ten times its bulk of muck, or other organic matter which has previously been treated with the salt and lime mixture, will make a manure of but little, if any, less value than that taken in its pure form from the stables. For soils deficient of organic matter, and most soils are so, these composts are invaluable.

The decomposed organic matter has many other uses besides composting with stable manures, for its deodorizing powers are nearly equal to those of charcoal dust, and the absorbing powers for fluids are much greater. Mixed with night soil, it forms *poudrette*, an admirable and effective manure for all crops in all soils, for the food of man contains all the requirements of plants.

When thoroughly made, the decomposed organic matter may be used as a divisor for guano and be retained until used by plants, instead of being wasted in part by evaporation in the atmosphere. Sandy soils, by its use, are rendered retentive of manures while clayey soils are made to yield their tenacity, and to become more easily workable.

We have given above all the directions required, in connection with our article on the Management of Compost Heaps and Importance of a Divisor for Manures, the reader cannot but understand the use and importance of our present recommendation; but no part of the directions must be neglected, for the more mixing together of lime and salt will not make chloride of lime and carbonate of soda, nor will the putting of lime and salt into muck or other inorganic matter produce similar results; nor can the lime and salt mixture be made with slaked lime, nor will salt river water alone without further addition of salt make the mixture properly for the purposes we have named, although when lime is to be used on land, it will prove more valuable when slaked with sea water than with spring water. Nor will lime added to muck produce the same results as the mixture proposed; for add lime alone to muck it will decompose it, but by a large loss of its more valuable portions, rendered volatile by the lime, while other portions of the muck are not prepared to detain it. Nor will the mixing together of manure muck, and the mixture, answer so well as first to decompose the muck or other organic matter by the salt and lime mixture and then, and not until then, to compost it with the stable and other manures for further decomposition. The farmer who has on hand in the fall five hundred loads of prepared muck, and the prospect of fifty or one hundred loads of manure during winter, to compost with it, will be better off in two years, than one who may have in the spring three hundred loads of manure in an open barn-yard composed of dung and litter alone.